Agilent NetMetrix Data Collectors

Technical Evaluation Guide

Purpose of this Guide

The purpose of this guide is to present a technical overview of Agilent NetMetrix data collectors. This document provides a technical description of the data collectors with memory allocations, environmental specifications, and ordering information. This Technical Evaluation Guide assumes the reader has a fundamental understanding of network and system management concepts. The reference section at the end of this document lists other reading materials that may be helpful and how to access these materials.

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Managing Today's Business-Critical Networks

Today's information networks are an integral component of business success enabling enterprises to create a competitive advantage. These business-critical networks are used to generate revenue, electronically order materials, issue payments to vendors, and facilitate internal and external communications. In short, they are essential to the daily operation of the business.

Given the importance of the network, most companies only have limited information regarding the performance and usage of this critical business asset. For many companies, what happens on the network remains a mystery and network problems are frequently handled reactively rather than proactively.

Agilent NetMetrix products help take the mystery out of network performance so that network problems can quickly be isolated and potential bottlenecks corrected before they affect end-user productivity. Agilent NetMetrix solutions provide the tools needed to help network managers:

- increase network availability by quickly identifying the root cause of a network problem,
- improve network performance by recognizing potential bottlenecks before they become a problem and helping tune the network,
- manage network services by helping create and maintain network service level agreements,
- reduce and control network costs, and justify network expenditures, and
- extend the power of HP OpenView Network Node Manager.

Generating the in-depth network visibility described above requires a variety of media-specific data collection devices. Agilent NetMetrix offers a wide range of popular media probes for data collection including Ethernet, Fast Ethernet, Token-Ring, FDDI, ATM, V-Series, HSSI, T1, T3/DS-3, E1 and E3, OC-3c and OC-12c.

Agilent NetMetrix data collectors are high-performance devices dedicated to passively collecting detailed network traffic statistics. Each probe uses a state-of-the-art, no-compromise design to provide the highest performance solution for the given media, ensuring that data is always collected -- even during times of network saturation.

In addition, NetMetrix data collectors:

- have a dedicated high-speed processor with 32 MB of memory (many expandable to 128) to process and store the information it captures,
- most configurations are available in single and multi-port configurations,
- implement the RMON-1 MIB according to RFC 1757 and RMON-2 MIB according to RFC 2021 and RFC 2074,
- support NetMetrix's Extended RMON technology that provides greater protocol detail and information for correlating time, hosts, and protocol statistics,
- include extensions for VLAN processing, per-PVC data collection, physical layer statistics and network layer statistics.
- are rack-mountable, reducing the footprint required to monitor a complex network, and
- most configurations include a telemetry port that allows a separate monitoring network to be created so the network can be monitored without using any operational network bandwidth.

Product Summary Guide

Data Collectors

4986B Ethernet LanProbe
The Agilent 4986B Ethernet LanProbe is an RMON-1 and RMON-2 compliant SNMP-managed monitor for managing IEEE 802.3 Ethernet segments. More information on this product can be found on page 6.

4987B Ethernet LanProbe with AUI
The Agilent 4987B Ethernet LanProbe with AUI is an RMON-1 and RMON-2 compliant SNMP-managed monitor for managing IEEE 802.3 Ethernet segments. More information on this product can be found on page 6.

J3457A Quad Ethernet LanProbe
The Agilent J3457A Quad Ethernet LanProbe is an RMON-1 and RMON-2 compliant SNMP-managed monitor for Ethernet networks. It addresses switched LAN and other multisegment monitoring applications by offering four monitoring ports. One of which is a telemetry interface that provides the ability to restrict network management traffic to a LAN reserved for management.More information on this product can be found on page 7.

J3458A Fast Ethernet LanProbe
The Agilent J3458A Fast Ethernet LanProbe is an RMON-1 and RMON-2 compliant SNMP-managed monitor for both 100BaseT-TX and 100BaseT-FX Fast Ethernet in either half-duplex (shared media) or full-duplex (dedicated media) remote monitoring applications. The Fast Ethernet LanProbe includes the capability to monitor either 10BaseT or 100BaseT and automatically detects which type of segment is being monitored. More information on this product can be found on page 7.

J3911A Multiport Token-Ring LanProbe
The Agilent J3911A Multiport Token-Ring LanProbe is an RMON-1 and RMON-2 compliant SNMP-managed segment monitor for token-ring networks, capable of monitoring up to 6 token-ring segments. 10 BaseT AUI, 10/100 BaseT half duplex RJ-45 connection for the telemetry network. More information on this product can be found on page 12.

J3320A FDDI LanProbe TP-PMD
The Agilent J3320A FDDI LanProbe TP-PMD is an RMON-1 and RMON-2 compliant SNMP-managed ring monitor for FDDI networks with network compatibility for TP-PMD, DB-9, and RJ-45. More information on this product can be found on page 15.

J3321B FDDI LanProbe SAS with Telemetry
The Agilent J3321B FDDI LanProbe SAS with Telemetry is an RMON-1 and RMON-2 compliant SNMP-managed ring monitor for FDDI networks with network compatibility for Multimode, MIC, Single-Attached Station. Support for single-mode FDDI is optional. More information on this product can be found on page 16.

J3322B FDDI LanProbe DAS with Telemetry
The Agilent J3322B FDDI LanProbe SAS with Telemetry is an RMON-1 and RMON-2 compliant SNMP-managed ring monitor for FDDI networks with network compatibility for Multimode, MIC, Dual-Attached Station. Support for single-mode FDDI is optional. More information on this product can be found on page 16.

J3913A T1 WanProbe
The Agilent J3913A T1 WanProbe is an RMON-1 and RMON-2 compliant SNMP-managed probe able to monitor SDLC, HDLC, PPP or Frame Relay on full and fractional channels. This probe may also connect to ANSI T1 primary rate circuits via RJ-48c or mini-bantam monitor jacks. Support for RJ-45 is optional. More information on this product can be found on page 19.

J3914A E1 WanProbe
The Agilent J3914A E1 WanProbe is an RMON-1 and RMON-2 compliant SNMP-managed probe able to monitor SDLC, HDLC, PPP or Frame Relay on full and fractional channels. This probe supports CEPT primary rate E1 and may connect to circuits using standard BNC, BR-2 coaxial, or DB-9 connectors. More information on this product can be found on page 19.

J3915A V-Series WanProbe
The Agilent J3915A V-Series WanProbe is an RMON-1 and RMON-2 compliant SNMP-managed probe able to monitor SDLC, HDLC, PPP or Frame Relay at line rates up to 2048kbps. This probe may connect to V.24 (RS-232), V.11 (the electrical part of X.21), V.36, RS-449, and V.35. More information on this product can be found on page 19.

J3916A HSSI WanProbe
The Agilent J3916A HSSI WanProbe is an RMON-1 and RMON-2 compliant SNMP-managed probe able to monitor SDLC, HDLC, PPP or Frame Relay at line rates up to 52Mbps. This probe connects to the HSSI interface via standard 50-pin HSSI connectors. More information on this product can be found on page 19.

J3917A T3/DS-3 WanProbe
The Agilent J3917A T3/DS-3 WanProbe is an RMON-1 and RMON-2 compliant SNMP-managed probe able to monitor SDLC, HDLC, PPP or Frame Relay over full span 44.736Mbps T3 lines using ANSI T1.107-1088 or ANSI T1.107a-1990 framing format. This probe supports ANSI T3 connections using standard BNC connectors. More information on this product can be found on page 20.

J3934A E3 WanProbe
The Agilent J3934A E3 WanProbe is an RMON-1 and RMON-2 compliant SNMP-managed probe able to monitor SDLC, HDLC, PPP or Frame Relay over full span 34.368Mbps E3 lines using CCITT G.751 framing format. This probe supports CCITT G.703 line rate at the demarcation point between the WAN and the local DSU/CSU using 75ohm BNC coaxial connectors. More information on this product can be found on page 20.

J3919A OC-3 ATM Probe
The Agilent J3919A OC-3 ATM Probe is an RMON-1 and RMON-2 compliant SNMP-managed probe able to monitor one ATM interface using multimode OC-3c/STM-1 fiber-optic connections. Support for single-mode OC-3c/STM-1 is optional. More information on this product can be found on page 22.

J3972A OC-3 Performance Enhanced ATMProbe
The Agilent J3972A OC-3 Performance Enhanced ATM Probe is an RMON-1 and RMON-2 compliant SNMP-managed probe able to monitor one ATM interface using multimode OC-3c/STM-1 fiber-optic connections. Support for single-mode OC-3c/STM-1 is optional. More information on this product can be found on page 22.

J3920A DS-3 ATM Probe
The Agilent J3920A DS-3 ATM Probe is an RMON-1 and RMON-2 compliant SNMP-managed probe able to monitor one DS-3 ATM connection with C-bit or M23 framing. More information on this product can be found on page 22.

J3921A E3 ATM Probe
The Agilent J3921A E3 ATM Probe is an RMON and RMON2-compliant probe able to monitor one E3 ATM connection with G.832 or G.751 framing. More information on this product can be found on page 23.

J3988A OC-12 ATM Probe
The Agilent J3988A OC-12c/STM-4 ATM Probe employs SC style connections for either multi-mode or single-mode fiber. Gathers ATM cell-based statistics and AAL5 protocol statistics on either full channel or per VCC basis.
More information on this product can be found on page 23.

Ethernet Overview

The Agilent NetMetrix LanProbe offering for Ethernet includes the 4986B Ethernet LanProbe, 4987B Ethernet LanProbe with AUI, J3458A Fast Ethernet LanProbe, and the J3457A Quad Ethernet LanProbe. The Agilent Ethernet LanProbes fully implement all nine groups of the RMON-1 MIB according to RFC 1757 and RMON-2 according to RFC 2021 and 2074 and can be managed by any SNMP/RMON and RMON2-compliant network management applications.

All Agilent Ethernet LanProbes:

- allow for multiple SNMP trap addresses or groups of addresses to be defined for event notification,
- include the capability to detect duplicate IP addresses,
- support establishing an additional out-of-band connection to the probe using SLIP, and
- use FLASH ROM so that firmware may be easily upgraded from a central management site.

Additionally, private MIB extensions support the following Agilent NetMetrix/UX applications to provide capabilities beyond RMON and RMON2:

- scalable network monitoring and analysis through the Internetwork Response Manager by distributing the probes within and throughout the internetwork,
- powerful segment analysis capabilities with the hallmark Agilent NetMetrix/UX Zoom correlation, and comprehensive traffic analysis capabilities with the NetMetrix/UX Internetwork Monitor.

4986B Ethernet LanProbe
The Agilent 4986B Ethernet LanProbe provides monitoring for management of IEEE 802.3 Ethernet segments. The standard version of the Agilent 4986B includes 32 MB of memory, allowing host and matrix, as well as RMON-2, tables to be expanded, and packet capture buffers to be increased.

4987B Ethernet LanProbe with AUI
The Agilent 4987B Ethernet LanProbe with AUI provides monitoring for management of IEEE 802.3 Ethernet segments. The standard version of the Agilent 4987B includes 32 MB of memory, allowing host and matrix, as well as RMON-2, tables to be expanded, and packet capture buffers to be increased.

J3457A Quad Ethernet LanProbe

The J3457A Quad Ethernet LanProbe addresses switched LAN and other multisegment monitoring applications by offering four monitoring ports. One of these ports is a telemetry interface that provides the ability to restrict network management traffic to a LAN reserved for management purposes. Each port offers either an RJ-45 or AUI connection capable of monitoring packets at full Ethernet line rates and represents industry-leading monitoring and analysis performance. The standard version of the Agilent J3457A has 32 MB of memory to support RMON-2, and may optionally have 64MB of memory. The added memory allows for expanded host tables and larger packet capture buffers. In addition, the non-telemetry ports of the J3457A Quad Ethernet LanProbe are ideal for use on Cisco SPAN ports.

J3458A Fast Ethernet LanProbe

The Agilent J3458A Fast Ethernet LanProbe provides monitoring for 100BaseT-TX and 100BaseT-FX Fast Ethernet in either half-duplex (shared media) or full-duplex (dedicated media) remote monitoring applications. The probe includes the capability to monitor either 10BaseT or 100BaseT and automatically detects which type of segment is being monitored. The standard version of the J3458A includes 32 MB of memory to support RMON-2, and may optionally be increased to 64 MB or 128 MB of memory. In addition, the non-telemetry ports of the J3458A Fast Ethernet LanProbe options 200 and 202 are ideal for use on Cisco SPAN ports and can also provide per-VLAN monitoring when a trunk link is copied to the SPAN port. Option 201 is ideal for monitoring Cisco Ethernet trunk links including per-VLAN monitoring.

The J3458A offers four configurations to address different Fast Ethernet applications. The standard configuration supports 10/100BaseT monitoring with in-band reporting of management information. The three other configurations support half-duplex and full-duplex monitoring with a telemetry port for reporting management information over a separate LAN. Each configuration includes both serial interface and Ethernet access to management information. An AUI port for access over Ethernet and an RJ-45 connector for access over 10/100BaseT are standard features.

<u>Standard configuration</u>

- Provides a 10/100BaseT-TX half-duplex (collision domain) monitoring capability that automatically detects whether it is monitoring 10BaseT or 100BaseT.
- May access 10/100BaseT through an RJ-45 connector and Ethernet through an AUI connector.
- Supports in-band reporting of management information over 10BaseT or 100BaseT-TX and out-of-band reporting over SLIP.

Two half-duplex ports (Option 200)

- Option 200 provides two half-duplex ports; one port is the same as in the standard configuration while the second port increases the flexibility to monitor 100BaseT-TX (electrical) half-duplex segments.
- Option 200 is ideal for monitoring 100BaseT-TX half-duplex segments in which the high-performance media is a shared collision domain used to interconnect workstations and servers with hubs and switches.
- In this configuration the first port may be used as a telemetry interface. This option may terminate a segment, such as the monitor port of a switch.
- Includes an additional RJ-45 for monitoring segments, like server uplinks and workstation-to-hub connections, without having to use an additional hub or hub ports.
- Includes capability that allows segments to continue operating even if probe power is removed.

Full-duplex monitoring (Option 201)

- One port is the same as the standard configuration while the second port may monitor either 100BaseT-TX (electrical) or 100BaseT-FX (fiber-optic) segments in the full-duplex mode.
- Full-duplex segments operate as dedicated high-performance interfaces between hubs, switches, and servers. To monitor traffic flowing in both directions, without degradation, the probe uses dual receivers and transmitters to receive and repeat the information
- Option 201 is ideal for monitoring 100BaseT backbone connections and high-speed server uplinks.
- In this configuration, the telemetry port diverts all management information from the high-performance managed segment.
- The J4615A optical bypass switch must be used to avoid interfering with operation of high-speed links if probe power is removed.

Four half-duplex ports (Option 202)

- Option 202 addresses applications requiring a higher density half-duplex monitoring solution.
- One port is the same as the standard configuration while three ports may terminate switch or hub ports, or monitor uplinks without requiring an additional hub.

Optical Bypass Switch (J4615A)

The J3458A Fast Ethernet LanProbe incorporates the capability to interface with an external, optional fiber-optic switch so that the LanProbe may connect and disconnect from a full-duplex connection without interfering with network operations. The optional switch is powered by the probe; when power is applied to the switch, the probe connects to the link; when power is removed from the switch, the probe exits the link.

J3458A Fast Ethernet LanProbe Port configurations

	Standard	Option 200	Option 201	Option 202
Ports	Telemetry and Half-Duplex Monitor Port	Adds TX Half-Duplex Monitor Port	Adds TX/FX Full-Duplex Monitor Port	Adds 3 TX Half-Duplex Ports
Telemetry	In-band or SLIP	Out-of-Band	Out-of-Band	Out-of-Band
RJ-45	10/100BaseT	10/100BaseT	10/100BaseT	10/100BaseT
AUI	Ethernet	Ethernet	Ethernet	Ethernet
Fiber Function	Monitor/Transmit and Telemetry	Monitor-Only or Monitor/Transmit	Monitor-Only	Monitor-Only or Monitor/Transmit

NetMetrix 4986B Ethernet LanProbe and 4987B Ethernet LanProbe with AUI Specifications Matrix

	NetMetrix 4986B EThernet LanProbe	NetMetrix 4987B Ethernet LanProbe with AUI
Network Compatibility	IEEE 802.3 Ethernet	IEEE 802.3 Ethernet
Media Connection	UTP (RJ-45)	UTP (RJ-45) and AUI
Serial Interface	9-pin male	25 Pin Female
Supported Modems	Hayes-Compatible	Hayes-Compatible
Rack Mount Hardware	Available Optionally	Included
Dimensions (h x w x d)	3.8 x 15.9 x 24.1 cm (1.5 x 6.3 x 9.5 in)	4.3 x 42.5 x 23.5 cm (1.7 x 16.8 x 9.3 in)
Weight	Probe: .68 kg (1.5 lbs) Power Supply: .27 kg (0.6 lbs)	Probe: 2.72 kg (6 lbs)
Power Supply	External, Included	Internal
Power Requirements	120 VAC 50/60 Hz, .2 amps, 10.1 W 240 VAC 50/60 Hz, .1 amps, 13 W Range: 100 VAC to 240 VAC +/- 10%	120 VAC 50/60 Hz, .3 amps, 15.6 W 240 VAC 50/60 Hz, .2 amps, 23.8 W Range: 100 VAC to 240 VAC +/- 10%
Heat Output	45 BTU/hr	82 BTU/hr
Standards Compliance	EMC: EN 55011 (CISPR-11 Class A) EN 50082-1 (IEC 801-2, 3, 4) Safety: IEC 1010-1, CSA 22.2#1010.1	EMC: EN 55011 (CISPR-11 Class A) EN 50082-1 (IEC 801-2, 3, 4) Safety: IEC 1010-1, CSA 22.2#1010.1
Operating Environment	Temperature: 0 C to 55 C (32 F to 131 F) Humidity: 15% to 95% at 40 C (104 F)	Temperature: 0 C to 55 C (32 F to 131 F) Humidity: 15% to 95% at 40 C (104 F)
Storage Temperature	-40 C to 70C (-40 F to 158 F)	-40 C to 70C (-40 F to 158 F)

J3457A Quad Ethernet LanProbe and J3458A Fast Ethernet LanProbe Specifications

	NetMetrix J3457A Quad Ethernet LanProbe	**NetMetrix J3458A Fast Ethernet LanProbe**
Network Compatibility	IEEE 802.3, Ethernet Version 2.0 Management Station Communications: Ethernet Telemetry Port or SLIP	IEEE 802.3 Ethernet Version 2.0 and 802.3u Ethernet Communications: Ethernet Telemetry Port or SLIP
Media Connection	UTP (RJ-45) and AUI	AUI for Ethernet UTP (RJ-45 for 10/100BaseT) and SC for fiber optic
Serial Interface	25 Pin Female	25 Pin Female
Supported Modems	Hayes-Compatible	Hayes-Compatible
Rack Mount Hardware	Included	Included
Dimensions (h x w x d)	8.9 x 42.5 x 23.5 cm (3.5 x 16.8 x 9.3 in)	8.9 x 42.5 x 23.5 cm (3.5 x 16.8 x 9.3 in)
Weight	Probe: 4.5 kg (9.9 lbs)	Probe: 4.9 kg (10.8 lbs)
Power Supply	Internal	Internal
Power Requirements	120 VAC 50/60 Hz, .4 amps, 25 W 240 VAC 50/60 Hz, .3 amps, 30 W Range: 100 VAC to 240 VAC +/- 10%	120 VAC 50/60 Hz, .8 amps, 50 W 240 VAC 50/60 Hz, .5 amps, 55 W Range: 100 VAC to 240 VAC +/- 10%
Heat Output	103 BTU/hr	188 BTU/hr
Standards Compliance	EMC: EN 55011 (CISPR-11 Class A) EN 50082-1 (IEC 801-2, 3, 4) Safety: IEC 1010-1, CSA 22.2#231	EMC: EN 55011 (CISPR-11 Class A) EN 50082-1 (IEC 801-2, 3, 4) Safety: IEC 1010-1, CSA 22.2#1010.1
Operating Environment	Temperature: 0 C to 55 C (32 F to 131 F) Humidity: 15% to 95% at 40 C (104 F)	Temperature: 0 C to 55 C (32 F to 131 F) Humidity: 15% to 95% at 40 C (104 F)
Storage Temperature	-40 C to 70C (-40 F to 158 F)	-40 C to 70C (-40 F to 158 F)

Ethernet LanProbe Memory Allocations Matrix

	4986B Ethernet LanProbe and 4987B Ethernet LanProbe/AUI	J3457A Quad Ethernet LanProbe	J3458A Fast Ethernet LanProbe
Parameter	32 MB	64 MB	128 MB
Host Table Size	102,000	209,000	424,000
Maximum Number of RMON MIB TopN Studies	12	12	12
Maximum Entries per TopN Study	25,000	51,000	103,000
Maximum Traffic Matrix Table Size	169,000	345,000	698,000
Maximum Number of History Studies	12	12	12
Total Number of History Buckets All Studies	159,000	326,000	659,000
Network Layer Host Table Size	143,000	293,000	593,000
Network Layer Traffic Matrix Table Size	62,500	127,000	258,000
Application Layer Host Table Size	250,000	510,000	1,032,600
Application Layer Traffic Matrix Table Size	127,000	261,000	527,000
Maximum Entries Per RMON2 TopN Study	221,000	451,000	913,000
Maximum Entries Per RMON2 Address Map	221,000	451,000	913,000
Maximum Number of Alarms	24,000	50,000	102,000
Maximum Number of Events	155,000	317,000	641,000
Log Table Entries	1,024	1,024	1,024
Maximum Number of Filters	32	32[1]	32[1]
Maximum Number of Channels	32	32[1]	32[1]
Maximum Number of Packet Capture Buffers	32	32[1]	32[1]
Trace Buffer Packet Capacity	NA	NA	NA
Trace Buffer Octet Capacity	8 - 30 MB	16 - 62 MB	32 - 126 MB
Maximum Number of Community Names in Community Access Table	20	20[1]	20[1]
Maximum Number of IP Address Entries in Client Table	20	20[1]	20[1]
Maximum Number of Trap Destination Entries (NetMetrix Private MIB)	30	30[1]	30[1]
Maximum SLIP Connection Entries	20	20	20
Maximum Single Shot Pings	20	20	20
Maximum List Pings	100	100	100

[1] These numbers indicate that the J3457A Quad Ethernet LanProbe and the J3458A Fast Ethernet LanProbe will reserve memory for the minimum number shown in the table. If memory is available, these numbers can be higher.

Token-Ring Overview

The Agilent LanProbe offering for token-ring is the J3911A Multi Port Token-Ring LanProbe. The Agilent token-ring LanProbe fully implements all ten groups of the RMON-1 MIB according to RFC 1757 and RFC 1513, and RMON-2 according to RFC 2021 and 2074 and can be managed by any SNMP/RMON and RMON-2 compliant network management application.

The Agilent Token-Ring LanProbe:

- allows for multiple SNMP trap addresses or groups of addresses to be defined for event notification,
- includes the capability to detect duplicate IP addresses,
- uses FLASH ROM so that firmware may be easily upgraded from a central management site, and
- firmware may be downloaded over the LAN or over the serial link using the Xmodem protocol.

Additionally, private MIB extensions support the following Agilent NetMetrix/UX applications to provide capabilities beyond RMON-1 and RMON-2:

- scalable network monitoring and analysis through the Internetwork Response Manager by distributing the probes within and throughout the internetwork,
- powerful segment analysis capabilities with Agilent NetMetrix' hallmark Zoom correlation, and
- comprehensive traffic analysis capabilities with the Internetwork Monitor.

J3911A Multi Port Token-Ring

The Agilent J3911A Multiport Token-Ring LanProbe provides monitoring for management of token-ring networks, capable of monitoring up to 6 token-ring segments. The standard version of the Agilent J3911A Multiport Token-Ring LanProbe includes 64 MB of memory and optionally may have 128 MB of memory. The probe is an RMON-1 and RMON-2 compliant SNMP-managed segment monitor. 10 BaseT AUI, 10/100 BaseT half duplex RJ-45 connection for telemetry network. Additionally the non-telemetry ports of the J3911A Multi Port Token-Ring LanProbe are ideal for use on Cisco ESPAN ports.

Token-Ring LanProbe Specifications Matrix

	J3911A Multi Port Token-Ring LanProbe
Network Compatibility	IEEE 802.5, Token-Ring Communications: SLIP
Media Connection	STP (DB-9) UTP (RJ-45)
Serial Interface	25 Pin Female
Supported Modems	Hayes-Compatible
Rack Mount Hardware	Included
Dimensions (h x w x d)	8.9 x 42.5 x 23.5 cm (3.5 x 16.8 x 9.3 in)
Weight	Probe: 5.9 kg (13 lbs) without options
Power Supply	Internal
Power Requirements	120 VAC 50/60 Hz, 1.5 amps, 60 W 240 VAC 50/60 Hz, .75 amps, 62.5 W Range: 100 VAC to 240 VAC +/- 10%
Heat Output	214 BTU/hr
Standards Compliance	EMC: EN 55011 (CISPR-11 Class A) EN 50082-1 (IEC 801-2, 3, 4) Safety: IEC 1010-1, CSA 22.2#1010.1
Operating Environment	Temperature: 0 C to 45 C (32 F to 113 F) Humidity: 15% to 95% at 40 C (104 F)
Storage Temperature	-40 C to 70C (-40 F to 158 F)

Token-Ring LanProbe Memory Allocations Matrix

Parameter	32 MB	64 MB	J3911A Multiport Token-Ring LanProbe 128 MB
Host Table Size	102,000	209,000	424,000
Maximum Number of RMON MIB TopN Studies	12	12	12
Maximum Entries per TopN Study	25,000	51,000	103,000
Maximum Traffic Matrix Table Size	169,000	345,000	698,000
Maximum Number of History Studies	12	12	12
Total Number of History Buckets All Studies	117,000	239,000	659,000
Network Layer Host Table Size	143,000	293,000	593,000
Network Layer Traffic Matrix Table Size	62,500	127,000	258,000
Application Layer Host Table Size	250,000	510,000	1,032,600
Application Layer Traffic Matrix Table Size	127,000	261,000	527,000
Maximum Entries Per RMON2 TopN Study	221,000	451,000	913,000
Maximum Entries Per RMON2 Address Map	221,000	451,000	913,000
Maximum Number of Alarms	24,000	50,000	102,000
Maximum Number of Events	155,000	317,000	641,000
Log Table Entries	1,024	1,024	1,024
Maximum Number of Filters	32	32[2]	32[2]
Maximum Number of Channels	32	32[2]	32[2]
Maximum Number of Packet Capture Buffers	32	32[2]	32[2]
Trace Buffer Packet Capacity	NA	NA	NA
Trace Buffer Octet Capacity	8 - 30 MB	16 - 62 MB	32 - 126 MB
Maximum Number of Community Names in Community Access Table	20	20[1]	20[1]
Maximum Number of IP Address Entries in Client Table	20	20[2]	20[2]
Maximum Number of Trap Destination Entries (NetMetrix Private MIB)	30	30[2]	30[2]
Maximum SLIP Connection Entries	20	20[2]	20[2]
Maximum Single Shot Pings	20	20[2]	20[2]
Maximum List Pings	100	100	

[2] These numbers indicate that the J3911A Multiport Token-Ring LanProbe will reserve memory for the minimum number shown in the table. If memory is available, these numbers can be higher.

FDDI Overview

The Agilent LanProbe offering for FDDI includes the J3320A FDDI LanProbe TP-PMD, J3321B FDDI LanProbe SAS with Telemetry, and the J3322B FDDI LanProbe DAS with Telemetry. The FDDI LanProbes fully implement groups 3 through 9 of the RMON-1 MIB according to RFC 1757, and all groups of the RMON-2 MIB according to RFC 2021 and 2074. The probes can be managed by any SNMP/RMON-compliant network management application.

All Agilent FDDI LanProbes:

- comply with ANSI X3T9.5 for FDDI rings,
- use FLASH ROM so that firmware may be easily upgraded from a central management site,
- firmware may be downloaded over the LAN using TFTP protocol or over the serial link using the Xmodem protocol,
- provide extensions specific to monitoring FDDI including SMT packet statistics,
- provide a Media Interface Connector (MIC) interface for connectivity to multi-mode optical fiber 62.5/125,
- include SMT 7.2 FDDI Station Management software,
- provide two Agilent proprietary FDDI Statistics and History groups,
- allow management data to be reported in-band via the monitored ring,
- allow management data to be reported out-of-band through a serial port using SLIP,
- provide echo test monitoring,
- allow for multiple SNMP trap addresses or groups of addresses to be defined for event notification, and
- include capability to detect duplicate IP addresses.

The FDDI LanProbe family monitors network performance continuously to track traffic levels, errors, and other important trends. Alarm thresholds can be set on any of the parameters, immediately alerting the network manager or initiating a packet trace to capture the details of the event for later analysis. Traffic and error levels are also monitored on a per-node basis for each station on the ring.

Additionally, private MIB extensions support the following Agilent NetMetrix/UX applications to provide capabilities beyond RMON-1 and RMON-2:

- scalable network monitoring and analysis through the Internetwork Response Manager by distributing the probes within and throughout the internetwork,
- powerful segment analysis capabilities with the hallmark Agilent NetMetrix/UX Zoom correlation, and
- comprehensive traffic analysis capabilities with the Internetwork Monitor.

J3321B FDDI LanProbe with Telemetry

The Agilent J3321B FDDI LanProbe SAS with Telemetry provides monitoring for management of FDDI networks. The standard version of the Agilent J3321B includes 32 MB of memory, and may optionally be increased to 64 MB. The added memory allows host and matrix, as well as RMON-2, tables to be expanded and packet capture buffers to be increased. The Agilent J3321B also provides an additional Ethernet interface for reporting management data out-of-band, allowing management traffic to be restricted to a LAN reserved for that purpose. Additionally, the FDDI ports of the J3321B FDDI LanProbe SAS with Telemetry are ideal for use on Cisco SPAN ports.

The Agilent J3321B comes standard with multi-mode transceivers. Optionally, single-mode transceivers can be specified to replace multi-mode transceivers. The single-mode transceivers conform to Category I requirements of ANSI X3.184 Single-Mode Fiber, Physical Layer Medium Dependent (SMF-PLMD). The nominal wavelength of operation is 1300 nm at data rates of up to 125 Mb/s. The receptacle for the duplex optical connector is designed to mate with the MIC as defined in ANSI SMF-PLMD.

J3322B FDDI LanProbe DAS with Telemetry

The Agilent J3322B FDDI LanProbe DAS with Telemetry provides monitoring for management of FDDI networks. The standard version of the Agilent J3322B includes 32 MB of memory, and may optionally be increased to 64 MB. The added memory allows host and matrix, as well as RMON2, tables to be expanded and packet capture buffers to be increased. The Agilent J3322B also provides an additional Ethernet interface for reporting management data out-of-band, allowing management traffic to be restricted to a LAN reserved for that purpose.

The Agilent J3322B comes standard with multi-mode transceivers. Optionally, single-mode transceivers can be specified to replace multi-mode transceivers. The single-mode transceivers conform to Category I requirements of ANSI X3.184 Single-Mode Fiber, Physical Layer Medium Dependent (SMF-PLMD). The nominal wavelength of operation is 1300 nm at data rates of up to 125 Mb/s. The receptacle for the duplex optical connector is designed to mate with the MIC as defined in ANSI SMF-PLMD.

The Agilent J3322B FDDI LanProbe DAS with Telemetry, with option 125, incorporates the capability to interface with an external, optional fiber-optic switch so that the probe may connect and disconnect from a ring without interfering with network operations. The optional switch is powered by the probe; when power is applied to the switch, the probe connects to the ring; when power is removed from the switch, the probe exits the ring.

FDDI LanProbe Specifications Matrix

	J3321B FDDI LanProbe SAS with Telemetry	**J3322B FDDI LanProbe DAS with Telemetry**
Network Compatibility	FDDI, Multi-Mode (Single-Mode optional), MIC, Single-Attached Station (SAS)	FDDI, Multi-Mode (Single-Mode optional), MIC, Dual-Attached Station (DAS)
Ethernet Telemetry	IEEE 802.3 Ethernet	IEEE 802.3 Ethernet
Ethernet Connectors	RJ-45 and AUI	RJ-45 and AUI
ANSI Standard Compliance	FDDI ANSI X3T9.5, ANSI TP-PMD, SMT 7.2	
Serial Interface	25 Pin Female	
Supported Modems	Hayes-Compatible	
Rack Mount Hardware	Included	
Dimensions (h x w x d)	4.3 x 42.5 x 23.5 cm (1.7 x 16.8 x 9.3 in)	
Weight	Probe: 2.72 kg (6 lbs)	
Power Supply	Internal	
Power Requirements	120 VAC 50/60 Hz, .6 amps, 38.8 W 240 VAC 50/60 Hz, .4 amps, 42.5 W Range: 100 VAC to 240 VAC +/- 10%	
Heat Output	146 BTU/hr	
Standards Compliance	EMC: EN 55011 (CISPR-11 Class A) EN 50082-1 (IEC 801-2, 3, 4) Safety: IEC 1010-1, CSA 22.2#1010.1	
Operating Environment	Temperature: 0 C to 55 C (32 F to 131 F) Humidity: 15% to 95% at 40 C (104 F)	
Storage Temperature	-40 C to 70C (-40 F to 158 F)	

FDDI LanProbe Memory Allocations Matrix

Parameter	For All FDDI Probes 32 MB	64 MB
Host Table Size	102,000	209,000
Maximum Number of RMON MIB TopN Studies	12	12
Maximum Entries per TopN Study	25,000	51,000
Maximum Traffic Matrix Table Size	169,000	345,000
Maximum Number of History Studies	12	12
Total Number of History Buckets All Studies	65,000	133,000
Network Layer Host Table Size	143,000	293,000
Network Layer Traffic Matrix Table Size	62,500	127,000
Application Layer Host Table Size	250,000	510,000
Application Layer Traffic Matrix Table Size	127,000	261,000
Maximum Entries Per RMON2 TopN Study	221,000	451,000
Maximum Entries Per RMON2 Address Map	221,000	451,000
Maximum Number of Alarms	24,000	50,000
Maximum Number of Events	155,000	317,000
Log Table Entries	1,024	1,024
Maximum Number of Filters	32[3]	32[3]
Maximum Number of Channels	32[3]	32[3]
Maximum Number of Packet Capture Buffers	32[3]	32[3]
Trace Buffer Packet Capacity	NA	NA
Trace Buffer Octet Capacity	8 - 30 MB	16 - 62 MB
Maximum Number of Community Names in Community Access Table	20[1]	20[1]
Maximum Number of IP Address Entries in Client Table	20[3]	20[3]
Maximum Number of Trap Destination Entries (NetMetrix Private MIB)	30[3]	30[3]
Maximum SLIP Connection Entries	20	20
Maximum Single Shot Pings	20	20
Maximum List Pings	100	100

[3] These numbers indicate that the FDDI LanProbes will reserve memory for the minimum number shown in the table. If memory is available, these numbers can be higher.

WAN Overview

The Agilent WanProbe offering for WAN monitoring includes the J3913A T1 WanProbe, J3914A E1 WanProbe, J3915A V-Series WanProbe, J3916A HSSI WanProbe, J3917A T3/DS-3 WanProbe and the J3934A E3 WanProbe. The Agilent WanProbes support the most common methods of encapsulation including RFC 1490 for Frame Relay and the Cisco and Wellfleet proprietary methods. In addition to specific WAN MIBs, these probes implement MIB-2, Agilent proprietary, and RMON-2 MIBs. The probes also support the collection of statistics by Frame Relay PVC. With available options, these WanProbes can provide monitoring of one, two, or three WAN interfaces simultaneously. All Agilent WanProbes include:

- SNMP Version 1 and SNMP Version 2 to support 64-bit counters and GetBulk,
- compliance with RFC 1213; MIB-II,
- compliance with RFC 2233; The interfaces group using SMIv2
- compliance with RFC 1757 (RMON-1); full implementation of RMON groups 3, 7, 8 and 9 for alarms and packet capture,
- compliance with RFC 2021 (RMON-2); full implementation of RMON-2 groups 11-20,
- compliance with RFC 1513,
- compliance with RFC 2074 (MIB protocol identifiers),
- security features to disable RMON-1 packet capture, firmware download, and traffic generation,
- IP address tracking/duplicate IP address detection (For LAN interfaces only),

- default history studies,
- current utilization object,
- out of band access via SLIP; support for direct connect, modems, and data switches,
- four level authentication scheme for access control,
- Warm start / Cold start capability,
- flash memory to support firmware download via the LAN and serial interface, and
- a real time clock with battery back-up and remote debugging capability.

J3913A T1-Series WanProbe
The Agilent J3913A T1 WanProbe monitors HDLC, SDLC, PPP, or Frame Relay. This T1 WanProbe may connect to ANSI T1 primary rate circuits via RJ-48c or mini-bantam monitor jacks. Support for RJ-45 connections is optional.

J3914A E1-Series WanProbe
The Agilent J3914A E1 WanProbe monitors HDLC, SDLC, PPP, or Frame Relay. This E1 WanProbe supports CEPT primary rate E1 and may connect to circuits using standard BNC connectors, BR-2 coaxial, or DB-9 connectors.

J3915A V-Series WanProbe
The Agilent J3915A V-Series WanProbe monitors HDLC, SDLC, PPP, or Frame Relay. This V-Series WanProbe may connect to V.24 (RS-232), V.11 (the electrical part of X.21), V.35, V.36 and RS-449 and EIA-530 circuits.

J3916A HSSI WanProbe
The Agilent J3916A HSSI WanProbe monitors HDLC, SDLC, PPP or Frame Relay at line rates up to 52Mbps. The probe connects to the HSSI interface via standard 50-pin HSSI connectors.

J3917A T3/DS-3 WanProbe
The Agilent J3917A T3/DS-3 WanProbe monitors HDLC, SDLC, PPP, or Frame Relay. This T3/DS-3 WanProbe connects to a full span ANSI T3 circuit (44.736Mbps) via BNC connectors.

J3934A E3 WanProbe
The Agilent J3934A E3 WanProbe monitors HDLC, SDLC, PPP or Frame Relay. This E3 WanProbe connects to a full span E3 lines using CCITT G.751 framing format.

WanProbe Specifications Matrix

	J3913A T-1 WanProbe	J3914A E-1 WanProbe	J3915A V-Series WanProbe	J3917A T3/DS-3 WanProbe J3934A E3 WanProbe	J3916A HSSI WanProbe
Network Compatibility	Communications: SLIP				
Media Connection	RJ-48C and mini-Bantam connectors (an adapter kit from RJ-48C to RJ-45 is available to order as product number J1927A)	BNC, BR-2 or DB-9 connectors	V.24 (RS-232), V.35, V.11, V.36, RS-449, or EIA-530	BNC	50-pin HSSI connector
Ethernet Telemetry	IEEE 802.3 Ethernet				
Serial Interface	25-pin Female				
Supported Modems	Hayes-Compatible				
Rack Mount Hardware	Included				
Dimensions (h x w x d)	8.9 x 42.5 x 23.5 cm (3.5 x 16.8 x 9.3 in)				
Weight	Probe: 5.9 kg (13 lbs)				
Power Supply	Internal				
Power Requirements	120 VAC 50/60 Hz, 1.5 amps, 60 W 240 VAC 50/60 Hz, .75 amps, 62.5 W Range: 100 VAC to 240 VAC +/- 10%				
Heat Output	214 BTU/hr				
Standards Compliance	EMC: EN 55011 (CISPR-11 Class A) EN 50082-1 (IEC 801-2, 3, 4) Safety: IEC 1010-1, CSA 22.2#1010.1				
Operating Environment	Temperature: 0 C to 45 C (32 F to 113 F) Humidity: 15% to 95% at 40 C (104 F)				
Storage Temperature	-40 C to 70C (-40 F to 158 F)				

WanProbe Memory Allocations Matrix

	For All WAN Probes, Unless Otherwise Indicated		
Parameter	32 MB	64 MB	128 MB
Total Number of History Buckets All Studies (Frame Relay)	169,000	345,000	698,000
Total Number of History Buckets All Studies (PPP)	151,000	309,000	625,000
Total Number of History Buckets All Studies	T-1: 99,000 E-1: 99,000 V-Series: 159,000	T-1: 202,000 E-1: 202,000 V-Series: 326,000	T-1: 409,000 E-1: 409,000 V-Series: 659,000
Maximum Number of Alarms	24,000	50,000	102,000
Maximum Number of Events	155,000	317,000	641,000
Log Table Entries	1,024	1,024	1,024
Maximum Number of Filters	32[4]	32[4]	32[4]
Maximum Number of Channels	32[4]	32[4]	32[4]
Maximum Number of Packet Capture Buffers	32[4]	32[4]	32[4]
Trace Buffer Packet Capacity	NA	NA	NA
Trace Buffer Octet Capacity	8 - 30 MB	16 - 62 MB	32 - 126 MB
Maximum Number of Community Names in Community Access Table	20[4]	20[4]	20[4]
Maximum Number of IP Address Entries in Client Table	20[4]	20[4]	20[4]
Maximum Number of Trap Destination Entries (NetMetrix Private MIB)	30[4]	30[4]	30[4]
Maximum SLIP Connection Entries	20[4]	20[4]	20[4]

[4]These numbers indicate that the WanProbes will reserve memory for the minimum number shown in the table. If memory is available, these numbers can be higher.

ATM Overview

The Agilent ATMProbe offering for ATM monitoring includes the J3919A OC-3 ATMProbe, J3972A OC-3 Performance Enhanced ATMProbe, J3920A DS-3 ATMProbe, J3921A E3 ATMProbe and the J3988A OC-12 ATMProbe.

Standard features of the ATMProbes include:

- SNMP version 1,
- compliance with RFC 1213; MIB-II,
- compliance with RFC 2233; The interfaces group using SMIv2
- compliance with RFC 1757 (RMON-1); full implementation of RMON groups 3, 7, 8 and 9 for alarms and packet capture,
- compliance with RFC 1513;
- compliance with RFC 2021 (RMON-2); full implementation of RMON groups 11-20,
- compliance with RFC 2074 (MIB protocol identifiers),
- Agilent Proprietary ATM counters based on the IETF AToM MIB,
- security features to disable RMON-1 packet capture and firmware download,
- IP address tracking/duplicate IP address detection (For LAN interfaces only),
- default history studies,
- current utilization object,
- out of band access via SLIP; support for direct connect, modems, and data switches,
- four level authentication scheme for access control,

- Warm start / Cold start capability,
- flash memory to support firmware download via the LAN and serial interface, and
- battery backed-up real time clock and Remote debugging capability.

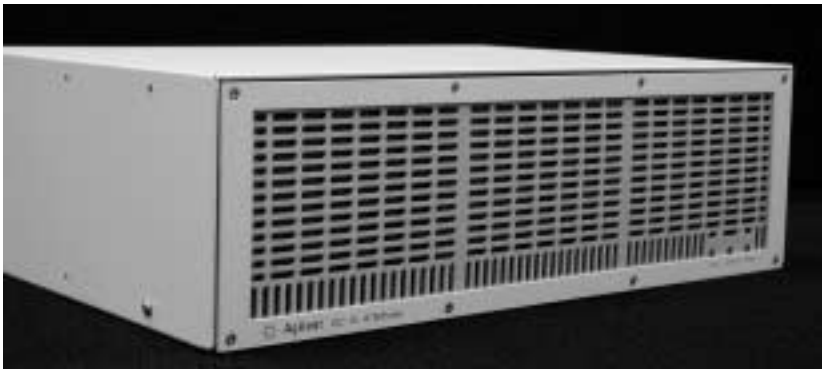
J3919A OC-3 ATMProbe
The Agilent J3919A OC-3 ATM Probe may monitor one multimode ATM interface for ATM OC-3c/STM-1 fiber-optic connections using the SC type interface. The Agilent J3919A implements MIB-2, RMON-2, Agilent configuration MIB, and a proprietary MIB for ATM counters. Support for single-mode is optional.

J3972A OC-3 Performance Enhanced ATMProbe
The Agilent J3972A OC-3 Performance Enhanced ATM Probe may monitor one multimode ATM interface for ATM OC-3c/STM-1 fiber-optic connections using the SC type interface. The Agilent J3919A implements MIB-2, RMON-2, Agilent configuration MIB, and a proprietary MIB for ATM counters. Support for single-mode is optional.

J3920A DS-3 ATMProbe
The Agilent J3920A DS-3 ATM Probe may monitor one ATM interface for ATM DS-3 (per ANSI T3.403) using 2 pair BNC connectors. The Agilent J3920A implements MIB-2, RMON-2, Agilent configuration MIB, and a proprietary MIB for ATM counters.

J3921A E3 ATMProbe
The Agilent J3921A E3 ATM Probe may monitor one ATM interface for ATM E3 (per G.834 and G.751) using 2 pair BNC connectors. The Agilent J3921A implements MIB-2, RMON-2, Agilent configuration MIB, and a proprietary MIB for ATM counters.

J3988A OC-12 ATMProbe
Introducing the Agilent OC-12c/STM-4 performance management data collector. The OC-12 ATMProbe monitors a single full duplex ATM OC-12 interface employing SC style connections for either multi-mode or single-mode fiber. In combination with our Agilent NetMetrix Network Performance management application software, the OC-12 ATMProbe gathers ATM cell-based statistics and AAL5 protocol statistics on either full channel or a per VCC basis. The probe supports all common LAN emulation encapsulations including LANE, MPOA, and classical IP over ATM. Performance management features also include utilization statistics, protocol distributions, top N reports, base-lining, conversation statistics, event thresholding and alarming, historical studies, and packet capture and decoding capabilities. Options include multi-mode or single-mode interface, 64 MB or 128 MB of memory, and multi-mode or single-mode optical splitters for non-intrusive



Standard features of the OC-12 ATMProbe include:

- SNMP Version 1 and SNMP Version 2 to support 64-bit counters and GetBulk,
- compliance with RFC 1213; MIB-II,
- compliance with RFC 2233; the interfaces group using SMIv2,
- compliance with RFC 1757 (RMON-1); full implementation of RMON groups 3, 7, 8 and 9 for alarms and packet capture,
- Agilent Proprietary ATM counters for ATM and AAL5 statistics
- Extended RMON for 7 layer statistics
- Security features to disable RMON-1 packet capture and firmware download,
- IP address tracking/duplicate IP address detection (For LAN interfaces only),
- Default history studies,
- Automatic current utilization calculation,
- Out of band access via PPP; support for direct connect and modems,
- Four level authentication scheme for access control,
- Warm start / Cold start capability,
- Flash memory to support firmware download via the LAN and serial interface, and
- Battery backed-up real time clock and Remote debugging capability.

ATM Probe Specifications Matrix

	J3919A OC-3 ATM Probe J3972A OC-3 Performance Enhanced ATM Probe	J3920A DS-3 ATM Probe J3921A E-3 ATM Probe	J3988A OC-12 ATM Probe
Network Compatibility	Communications: SLIP		
Media Connection	OC-3c/STM-1 via SC-type connector	BNC connector	OC-12c/STM-4 via SC-type connectors
Ethernet Telemetry	IEEE 802.3 Ethernet		
Serial Interface	25-pin Female		Dual 9-pin Male
Supported Modems	Hayes-Compatible		
Rack Mount Hardware	Included		
Dimensions (h x w x d)	8.9 x 42.5 x 23.5 cm (3.5 x 16.8 x 9.3 in)		13.3 x 42.7 x 30.5 (5.25 x 16.8 x 12.0)
Weight	Probe: 5.9 kg (13 lbs)		Probe: 6.4 kg (14 lbs)
Power Supply	Internal		
Power Requirements	120 VAC 50/60 Hz, 1.5 amps, 60 W Range: 100 VAC to 240 VAC +/- 10% 240 VAC 50/60 Hz, .75 amps, 62.5 W		
Heat Output	214 BTU/hr		
Standards Compliance	EMC: EN 55011 (CISPR-11 Class A) EN 50082-1 (IEC 801-2, 3, 4) Safety: IEC 1010-1, CSA 22.2#1010.1		
Operating Environment	Temperature: 0 C to 45 C (32 F to 113 F) Humidity: 15% to 95% at 40 C (104 F)		
Storage Temperature	-40 C to 70C (-40 F to 158 F)		

J3919A,J3972A, J3920A, and J3921A ATMProbe Memory Allocations Matrix

Parameter	32 MB	64 MB	128 MB
Total Number of History Buckets All Studies (AAL-5)	125,000	255,000	516,000
Total Number of History Buckets All Studies (PVC)	119,000	244,000	494,000
Total Number of History Buckets All Studies (ATM)	68,000	139,000	282,000
Maximum Number of Alarms	24,000	50,000	102,000
Maximum Number of Events	155,000	317,000	641,000
Log Table Entries	1,024	1,024	1,024
Maximum Number of Filters	32[5]	32[5]	32[5]
Maximum Number of Channels	32[5]	32[5]	32[5]
Maximum Number of Packet Capture Buffers	32[5]	32[5]	32[5]
Trace Buffer Packet Capacity	NA	NA	NA
Trace Buffer Octet Capacity	8 - 30 MB	16 - 62 MB	32 - 126 MB
Maximum Number of Community Names in Community Access Table	20[5]	20[5]	20[5]
Maximum Number of IP Address Entries in Client Table	20[5]	20[5]	20[5]
Maximum Number of Trap Destination Entries (NetMetrix Private MIB)	30[5]	30[5]	30[5]
Maximum SLIP Connection Entries	20[5]	20[5]	20[5]

J3988A ATMProbe Memory Allocations Matrix

Parameter	**64M**	**128M**
Total number of history buckets for all studies (AAL-5)	428,500	885,700
Total number of history buckets for all studies (PVC)	428,500	885,700
Total number of history buckets for all studies (ATM)	205,400	424,657
nlMatrixTable/alMatrixTableEntries	1,070,000	2,140,000
nlHostTable/alHostTableEntries	428,000	857,000
Maximum number of alarms	120,900	250,000
Maximum number of events	1,000,000	2,066,600
Log table entries	1,024	1,024
Maximum number of filters	32	32
Maximum number of channels	32	32
Maximum number of packet capture buffers	32	32
Trace buffer packet capacity	N/A	N/A
Trace buffer octet capacity	16/62MB	32/126MB
Maximum number of community names in Community AccessTable	20	20
Maximum number of IP address entries in Client Table	20	20

[5]These numbers indicate that the ATMProbes will reserve memory for the minimum number shown in the table. If memory is available, these numbers can be higher.

Agent MIB Support Matrix

Agents	Standards		Extensions		
	RMON1	RMON2	NetMetrix Extensions	Response Time Analysis (Echo)	Duplicate IP Detection
4986B Ethernet LanProbe	✓	✓	✓	✓	✓
4987B Ethernet LanProbe AUI	✓	✓	✓	✓	✓
J3457A Quad Ethernet LanProbe	✓	✓	✓	✓	✓
J3458A Fast Ethernet LanProbe	✓	✓	✓	✓	✓
4985B Token-Ring LanProbe	✓	✓	✓	✓	✓
J3911A Multi Port Token-Ring LanProbe	✓	✓	✓	✓	✓
J3321A, J3322B, J3323B FDDI LanProbes	✓	✓	✓	✓	✓
J3913A T1 WanProbe	✓	✓	✓		
J3914A E1 WanProbe	✓	✓	✓		
J3915A V-Series WanProbe	✓	✓	✓		
J3916A HSSI WanProbe	✓	✓	✓		
J3917A T3/DS-3 WanProbe	✓	✓	✓		
J3934A E3 WanProbe	✓	✓	✓		
J3919A OC-3 ATMProbe	✓	✓	✓		
J3972A OC-3 Performance Enhanced ATMProbe	✓	✓	✓		
J3920A DS-3 ATMProbe	✓	✓	✓		
J3921A E3 ATMProbe	✓	✓	✓		
J3988A OC-12 ATMProbe	✓	✓	✓		
J3443A Internetwork Response Agent (NetMetrix-UX) J3758A Internetwork Response Agent (NT)				✓	

Ordering Information

Product Number and Options	Product Description
DATA COLLECTORS[6]	
4986B	NetMetrix Ethernet LanProbe Requires NetMetrix/UX 4.70 or better. RMON and RMON2 compliant. Standard 32 MB RAM, Flash ROM, RJ-45 connectors. Installation manual included. Rack Mount Kit not included, order J2886A.
1A3	Bellcore CLEI Identification
W30	3 yr. Customer Return Repair Service
W50	5 yr. Customer Return Repair Service
J2886A	Rack Mount Kit for 4986B
4987B	NetMetrix Ethernet LanProbe with AUI Requires NetMetrix/UX 4.70 or better. Standard 32 MB RAM, Flash ROM RJ-45, AUI connectors. Installation Manual included. Rack Mount Kit included.
1A3	Bellcore CLEI Identification
W30	3 yr. Customer Return Repair Service
W50	5 yr. Customer Return Repair Service
J3457A	NetMetrix Quad Ethernet LanProbe Standard 32MB Total Memory, Flash ROM, DB-9 and RJ-45 connectors. Installation manual included. Rack Mount Kit included.
ANE	Replace 32 MB with 64 MB RAM
1A3	Bellcore CLEI Identification
W30	3 yr. Customer Return Repair Service
W50	5 yr. Customer Return Repair Service
J3458A	NetMetrix Fast Ethernet LanProbe Standard 32 MB RAM, Flash ROM, 10 BaseT AUI, 10/100 BaseT half duplex RJ-45 connection. Installation manual included. Rack Mount Kit included.
200	Add one 10/100 BaseT-TX interface.
201	Add two 10/100 BaseT-TX and FX interfaces.
202	Multi-Port Support for 100BaseT TX
ANE	Replace 32 MB with 64 MB RAM
ANS	Replace 32 MB with 128 MB RAM
1A3	Bellcore CLEI Identification
W30	3 yr. Customer Return Repair Service
W50	5 yr. Customer Return Repair Service

[6] Agilent products may contain remanufactured parts equivalent to new in performance or may have been subject to incidental use; products containing only new parts are available by special order.

J3911A	NetMetrix Multiport Token-Ring LanProbe RMON2 compliant,10 BaseT AUI, 10/100 BaseT half duplex RJ-45 connection telemetry port, 25-pin RS232 connection, DB-9 & RJ-45 connection, 1 year warranty. Installation/Users Guide and rackmount hardware included. Cables not included. Only one interface option and one memory option may be chosen (you MUST choose one). Option 203 and 204 are mutually exclusive.
203	Four Token Ring Interfaces
204	Six Token Ring Interfaces
ANE	64 MB total RAM
ANS	128 MB total RAM
W30	3 yr. Customer Return Repair Service
W50	5 yr. Customer Return Repair Service
J3321B	NetMetrix FDDI LanProbe/Multi-Mode, Single Attached with Telemetry Standard 32 MB Memory, Flash ROM, 10BaseT telemetry port. Installation manual included. Rack Mount Kit included.
ANE	Replace 32 MB with 64 MB Total Memory
500	Replace Multi-Mode Transceiver with Single Mode Transceiver
1A3	Bellcore CLEI Identification
W30	3 yr. Customer Return Repair Service
W50	5 yr. Customer Return Repair Service
J3322B	NetMetrix FDDI LanProbe/Multi-Mode, Dual Attached with Telemetry Standard 32 MB Memory, FlashROM, 10BaseT telemetry port. Installation manual included. Rack Mount Kit included.
ANE	Replace 32 MB with 64 MB Total Memory
125	FDDI Fiber Optic Bypass Switch
501	Replace Multi-Mode Transceiver with Two Single Mode Transceivers
1A3	Bellcore CLEI Identification
W30	3 yr. Customer Return Repair Service
W50	5 yr. Customer Return Repair Service
J2886A	Rack Mount Kit for 4986B Ethernet LanProbe
J3913A	NetMetrix T1 WanProbe T1, 10 BaseT AUI, 10/100 BaseT half duplex RJ-45 connection Ethernet telemetry port, 25 pin RS232 connection, 1 year warranty. Installation/Users Guide, rackmount hardware, pair of RJ-48C connectors & mini-bantam connectors included. Cables not included. Probe monitors ANSI T1 WAN interfaces. You must choose one interface option and one memory.
205	One T1 WAN Interface
206	Two T1 WAN Interfaces
207	Three T1 WAN Interfaces
ANC	32MB Total RAM
ANE	64MB Total RAM
ANS	128MB Total RAM
W30	Three year Customer Return Repair Service
W50	Five year Customer Return Repair Service

J3914A	NetMetrix E1 WanProbe E1, 10 BaseT AUI,10/100 BaseT half duplex RJ-45 connection Ethernet telemetry port, 25 pin RS232 connection, 1 year warranty. Installation/Users Guide and rackmount hardware included. Cables not included. Probe monitors G.703/704 E1 networks. Probe uses either BNC or dual conductor (BR2) connections. Only one interface and one memory option may be chosen (you must choose one).
205	One E1 WAN Interface w/BNC Connectors
206	Two E1 WAN Interfaces w/BNC Connectors
207	Three E1 WAN Interfaces w/BNC Connectors
215	One E1 WAN Interface w/BR2 Connectors
216	Two E1 WAN Interfaces w/BR2 Connectors
217	Three E1 WAN Interfaces w/BR2 Connectors
ANC	32MB Total RAM
ANE	64MB Total RAM
ANS	128MB Total RAM
W30	Three year Customer Return Repair Service
W50	Five year Customer Return Repair Service
J3915A	NetMetrix V-Series WanProbe V-series, 10 BaseT AUI, 10/100 Ethernet telemetry port, 25 pin RS232 connection, 1 year warranty. Installation/Users Guide and rackmount hardware included. Cables not included. Probe uses Y-cables to connect to network. You must use NetMetrix supplied cables for connecting to a V-series network. One interface and one memory option must be chosen.
205	One V-series Interface
206	Two V-series Interfaces
207	Three V-series Interfaces
ANC	32MB Total RAM
ANE	64MB Total RAM
ANS	128MB Total RAM
W30	Three year Customer Return Repair Service
W50	Five year Customer Return Repair Service
J3916A	NetMetrix HSSI WanProbe 10BaseT AUI, 10/100 BaseT half duplex RJ-45 connection Ethernet telemetry port monitors a single HSSI WAN interface. Includes Installation/Users Guide and rackmount hardware. You must choose one memory option.
ANC	32MB Total RAM
ANE	64MB Total RAM
ANS	127MB Total RAM
W30	Three year Customer Return Repair Service
W50	Five year Customer Return Repair Service
J3917A	NetMetrix T3/DS-3 WanProbe 10 BaseT AUI, 10/100 BaseT half duplex RJ-45 connection Ethernet telemetry port, 25 pin RS232 connection, 1 year warranty. Includes Installation/Users Guide, rackmount hardware, and monitors T3 via 2 pair of BNC connectors. Cables not included. Probe monitors ANSI T3 WAN interfaces. You must choose one memory option.
ANC	32MB Total RAM
ANE	64MB Total RAM
ANS	128MB Total RAM
W30	Three year Customer Return Repair Service
W50	Five year Customer Return Repair Service

J3934A	**NetMetrix E3 WanProbe**
	10BaseT AUI, 10/100 BaseT half duplex RJ-45 connection Ethernet telemetry port monitors a single CEPT E3 WAN interface. Includes Installation/Users Guide and rackmount hardware. You must choose one memory option.
ANS	128MB Total RAM
212	1 OC-3 Multi Mode Interface
ANC	32 MB Total RAM
ANE	64 MB Total RAM
W30	Three year Customer Return Repair Service
W50	Five year Customer Return Repair Service
J3972A	**NetMetrix OC-3C/STM-1 Performance Enhanced ATM Probe**
	10 BaseT AUI,10/100 BaseT half duplex RJ-45 connection Ethernet telemetry port, 25-pin RS-232 connection, 1 year warranty. Probe monitors OC-3c/STM-1 ATM connections. Probe is used for connection to SONET and SDH fiber-optic circuits and has 6-pin mini-DIN connector that allows ATM Probe to be connected to external optical bypass. Installation/Users guide and rackmount hardware included. Cables not included. Only one interface and one memory option may be chosen (you MUST choose one). Option 210 and 212 are mutually exclusive.
210	1 OC-3 Single Mode Interface
212	1 OC-3 Multi Mode Interface
ANC	32 MB Total RAM
ANE	64 MB Total RAM
ANS	128 MB Total RAM
W30	Three year Customer Return Repair Service
W50	Five year Customer Return Repair Service
J3920A	**NetMetrix DS-3 ATMProbe**
	10 BaseT AUI,10/100 BaseT half duplex RJ-45 connection Ethernet telemetry port, 25-pin RS-232 connection, 1 year warranty. Probe monitors a single DS-3 ATM connection via 2 pair BNC connectors. Installation/Users guide and rackmount hardware included. Cables not included. One memory option must be chosen.
ANC	32 MB Total RAM
ANE	64 MB Total RAM
ANS	128 MB Total RAM
W30	Three year Customer Return Repair Service
W50	Five year Customer Return Repair Service

J3921A	NetMetrix E3 ATMProbe 10 BaseT AUI,10/100 BaseT half duplex RJ-45 connection Ethernet telemetry port, 25-pin RS-232 connection, 1 year warranty. Probe monitors a single E3 ATM connection via 2 pair BNC connectors. Installation/Users guide and rackmount hardware included. Cables not included. One memory option must be chosen.
ANC	32 MB Total RAM
ANE	64 MB Total RAM
ANS	128 MB Total RAM
W30	Three year Customer Return Repair Service
W50	Five year Customer Return Repair Service
J3988A	NetMetrix OC-12c/STM-4 ATMProbe Probe monitors OC12c/STM-4 ATM connection. Includes 10/100 Ethernet telemetry port and 9 pin RS232 connection and 64 MB RAM.
210	OC-12 Single Mode Interface – One OC-12 Single Mode Interface with 1300 nm optical wavelength. Factory installed option.
212	OC-12 Multi-Mode Interface – One OC-12 Multi-Mode Interface with 850 nm optical wavelength. Factory installed option
ANS	128 MB Total RAM
J4613A	NetMetrix Single Mode Optical Splitter – NetMetrix Single Mode Optical Splitter has a 50/50 split ratio. Used to install ATMProbes and insulate customers from probe power loss.
J4614A	NetMetrix Multi-Mode Optical Splitter – NetMetrix Multi-Mode Optical Splitter has a 50/50 split ratio. Used to install ATMProbes and insulate customers from probe power loss.
J4615A	Optical Bypass Switch – A fiber optic bypass switch for use with the J3458A option 201, J3919A, J3972A and J3988A.

Additional Information Reference

For additional information on the Agilent NetMetrix Probes, see the NetMetrix Web site at: www.agilent.com/comms/netmetrix

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